Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Amend claims 6 and 15.

Listing of Claims:

1. **(original)** A voice detector comprising:

a plurality of Goertzel filters each operating at a different frequency within a voice range, some of the filters operating at frequencies of control signals and others of the filters operating at frequencies other than the control signals' frequencies, each filter for receiving a signal to be analyzed for presence of voice and detecting energy of the signal at the operating frequency of the filter; and

a comparator connected to the filters, for comparing the energies detected by the filters against thresholds and responsive to at least three of the filters simultaneously detecting energy above a noise threshold and below a control signal threshold by indicating that the signal comprises voice.

2. **(original)** The voice detector of claim 1 wherein:

the comparator is responsive to a filter of the filters operating at a frequency of a control signal and detecting energy above a control signal threshold by indicating that the analyzed signal comprises the control signal.

3. **(original)** The voice detector of claim 1 wherein:

the comparator is responsive to one of the filters operating at a frequency of a single-frequency control signal detecting energy above a first control signal threshold by indicating that the analyzed signal

comprises the single-frequency control signal, and is responsive to two of the filters operating at frequencies of a dual-frequency control signal each detecting energy above a second control signal threshold different from the first control signal threshold by indicating that the analyzed signal comprises the dual-frequency control signal.

4. **(original)** The voice detector of claim 1 further comprising:

a detector that detects total energy of the signal to be analyzed; wherein

the comparator is responsive to the total detected energy being below a noise threshold by indicating that the analyzed signal comprises noise or silence.

5. **(original)** The voice detector of claim 4 wherein:

the comparator compares the energies detected by the filters against the thresholds by comparing ratios of the energies detected by individual ones of the filters and the total detected energy against the thresholds.

6. **(currently amended)** A call classifier comprising:

a plurality of Goertzel filters each operating at a different frequency within a voice range, some of the filters operating at frequencies of control signals and others of the filters operating at frequencies other than the control signals frequencies, each filter for receiving windows of a signal to be analyzed for presence of voice and detecting energy of the signal in the windows at the operating frequency of the filter;

a detector that detects in the windows total energy of the signal to be analyzed; and

a comparator connected to the filters, for comparing ratios of the energies detected by the individual filters in a window and the total

detected energy in the window against thresholds, responsive to the total detected energy in the widow not exceeding a noise threshold by indicating that the analyzed signal comprises silence or noise, responsive to one of the filters operating at a frequency of a single-frequency control signal detecting in the window energy whose ratio exceeds a first control signal threshold by indicating that the analyzed signal comprises said single-frequency control signal, responsive to two of the filters operating at frequencies of a dual-frequency control signal each detecting in the window energy whose ratio exceeds a second control signal threshold by indicating that the analyzed signal comprises said dual-frequency control signal, and responsive to at least three of the filters each detecting in the window energy whose ratio exceeds a voice threshold by indicating that the signal comprises voice.

7. **(original)** The call classifier of claim 6 wherein:

each window represents a different segment of the signal to be analyzed.

8. **(original)** The call classifier of claim 6 wherein:

each window represents a different tapered segment of the signal to be analyzed.

9. **(original)** The call classifier of claim 6 wherein:

each window represents a different segment of the signal to be analyzed and wherein consecutive said windows partly overlap each other.

10. **(original)** A method of detecting voice in a signal to be analyzed for presence of voice, comprising:

detecting energy of the signal at operating frequencies of a plurality

of Goertzel filters each operating at a different frequency within a voice range with some of the filters operating at frequencies of control signals and others of the filters operating at frequencies other than the control signals' frequencies;

comparing the energies detected by the filters against thresholds; and

in response to at least three of the filters simultaneously detecting energy above a noise threshold and below a control signal threshold, indicating that the signal comprises voice.

11. **(original)** The method of claim 10 further comprising:

in response to a filter of the filters operating at a frequency of a control signal detecting energy above a control signal threshold, indicating that the analyzed signal comprises the control signal.

12. **(original)** The method of claim 10 further comprising:

in response to one of the filters operating at a frequency of a single-frequency control signal detecting energy above a first control signal threshold, indicating that the analyzed signal comprises the single-frequency control signal; and

in response to two of the filters operating at frequencies of a dual-frequency control signal each detecting energy above a second control signal threshold different from the first control signal threshold, indicating that the analyzed signal comprises the dual-frequency control signal.

13. **(original)** The method of claim 10 further comprising:

detecting total energy of the signal to be analyzed;

comparing the total detected energy against a noise threshold; and

in response to total detected energy being below the noise threshold, indicating that the analyzed signal comprises noise or silence.

14. **(original)** The method of claim 13 wherein:

comparing the energies detected by the filters comprises

comparing ratios of the energies detected by individual ones of the filters and the total detected energy against the thresholds.

15. **(currently amended)** A method of detecting voice in a signal to be analyzed for presence of voice, comprising:

detecting energy of the signal at operating frequencies of a plurality of Goertzel filters each operating at a different frequency within a voice range, some of the filters operating at frequencies of control signals and others of the filters operating at frequencies other than the control signals frequencies, wherein each filter receives windows of the signal to be analyzed for presence of voice and detects energy of the signal in the windows at the operating frequency of the filter;

detecting in the windows total energy of the signal to be analyzed;

comparing ratios of the energies detected by the individual filters in a window and the total detected energy in the window against thresholds;

in response to the total detected energy in the widow not exceeding a noise threshold, indicating that the analyzed signal comprises silence or noise;

in response to one of the filters operating at a frequency of a single-frequency control signal detecting <u>in the window</u> energy whose ratio exceeds a first control signal threshold, indicating that the analyzed signal comprises said single-frequency control signal;

in response to two of the filters operating at frequencies of a dual-frequency control signal each detecting <u>in the window</u> energy whose ratio exceeds a second control signal threshold, indicating that the analyzed signal comprises said dual-frequency control signal; and

in response to at least three of the filters each detecting <u>in the</u>

window energy whose ratio exceeds a voice threshold, indicating that the signal comprises voice.

16. **(original)** The method of claim 15 wherein:

each window represents a different segment of the signal to be analyzed.

17. **(original)** The method of claim 15 wherein:

each window represents a different tapered segment of the signal to be analyzed.

18. **(original)** The method of claim 15 wherein:

each window represents a different segment of the signal to be analyzed and wherein consecutive said windows partly overlap each other.